UNITED STATES PATENT AND TRADEMARK OFFICE

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EXAMINER
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ART UNIT	PAPER NUMBER
2672	

DATE MAILED: 10/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _19 July 2005_.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☐ Claim(s) _____ is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-2, 4-9, 11-17, 19, 21- 33, 35-37 and 39-48_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)
2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5)☐ Notice of Informal Patent Application (PTO-152)
6)☐ Other: _____.

Response to Arguments

Applicant's arguments filed 7/19/2005 have been fully considered but they are not persuasive.

Applicant on page 15 of the remarks requests for SPE review, because Applicant believes that the Examiner has overlooked important limitations set forth in the claims.

Examiner's reply: The SPE has been reviewed the Applicant's remarks.

Applicant on page 16 under rejection of 112 first paragraph argues that the Examiner's statements are completely unrelated to the enablement requirement of the 35 U.S.C. 112, first paragraph. The various observations and questions raised by the Examiner have nothing to do with this requirement.

Examiner's reply: According to MPEP section 2164 [R-2] the Enablement Requirement: The enablement requirement refers to the requirement of 35 U.S.C. 112, first paragraph that the specification describe how to make and how to use the invention. The invention that one skilled in the art must be enabled to make and use is that defined by the claim(s) of the particular application or patent. The purpose of the requirement that the specification describe the invention in such terms that one skilled in the art can make and use the claimed invention is to ensure that the invention is communicated to the interested public in a meaningful way. The information contained in the disclosure of an application must be sufficient to inform those skilled in the relevant art how to both make and use the claimed invention.

Applicant on page 17, second paragraph argues it is unclear how Examiner concludes that Applicants' invention claims just one type of display device, and moreover, how this issue relates to the enablement requirement.

Examiner's reply: Examiner's interpretations: the Applicants' invention is for "color accuracy" on a display device. Also Applicant on page 2 of the specification, lines 1-5 discloses that an online customer may order what appears to be a burgundy sweater but instead receive a bright red sweater. Indeed, color inaccuracy has become a significant cause for return of merchandise purchased by online customers. In some cases, this problem can erase the advantages obtained by the retailer's commitment in to online merchandising, and undermine continued investment. As Applicant on page 17 argues that the Examiner's observations concerning display types, sizes, resolutions, formats, and a display age, as well as "different levels of human eye visions have no relationship to the enablement requirement. Examiner's note: Computer monitors vary widely, and one color may not appear identical from one monitor to the next, and paint colors represented will vary depending on your screen settings, sizes, format, resolution, and of course different levels of human eye visions play an important rule in the current invention.

Applicant on page 18 argues about the questions raised from the Examiner, as follows:

Examiner questioned Applicant to verify, "How many gray elements, does applicant generate? Because the claim invention, claim 1 on page 2 of "claims", lines 3-5 and 7 claims "gray elements", the term is plural. It 's covered from two gray elements to infinity gray elements, i.e. considered a broad language. According to the MPEP section 2164 [R-2] the Enablement Requirement, emphasizes the invention that one skilled in the art must be enabled to

make and use is that defined by the claim(s) of the application. Claim 1 line 5 claims "displaying all of the gray elements simultaneously", e.g. displaying 500 gray elements (i.e. in the range of Applicant claim's invention, between 2 to ∞) on a display with 20" diagonally and a display of 3" diagonally, i.e. why the number of the gray elements and the size of display are important. Since it is not possible to achieve color accuracy for displaying 500 gray elements on the 3" display, Examiner's interpretation: the 500 gray elements may be display on a screen using a slide bar, similar to the reference Applet. Thus, Applicant on page 18 of the remarks, line 9 discloses that in some embodiments, Applicant disclosure shows nine gray elements or twenty-five gray elements.

Applicant on the same page third paragraph argues that the Examiner asked, "Is the gamma correction based on multi formats (NTSC, VGA, PAL, SECAM and etc.)? Examiner provides a brief summary of the two different display formats, e.g. the NTSC format or more correctly the M format; see broadcast television systems consists of 29.97 interlaced frames of video per second. Each frame consists of 480 lines out of a total of 525 (the rest are used for sync, vertical retrace, and other data such as captioning). The second display format is as follows: the PAL colour system is usually used with a video format that has 625 lines per frame (576 visible lines, the rest being used for other information such as sync data and captioning) and a refresh rate of 25 frames per second, interlaced, such as systems B, G, H, I, and N (see broadcast television systems for the technical details of each format). Now the revised question is as follows: Does the current invention work or compatible with other display format?

Applicant on the same page at last two lines responded to the Examiner's question i.e. "does the invention involve a combination of hardware and software?" the Applicant response is "what

different does it make?" Examiner's reply: usually this type of respond raises more new

questions. Examiner's note: A computer programming is the craft of implementing one or more

interrelated abstract algorithms using a particular programming language to produce a concrete

computer program. Programming has elements of art, science, mathematics, and engineering. A

computer is both hardware and software. One is useless without the other. The hardware design

specifies the commands it can follow, and the instructions tell it what to do. Another revised

question is: does the invention involve both hardware and software or the invention works

independently from the hardware parts?

Applicant on page 19 at second paragraph argues about the last Examiner's question, i.e. does

Applicant rely on human eye vision to measure the gamma correction or a hardware device?

Examiner's reply: Human eye color vision is based on the ability to discriminate between the

various wavelengths that constitute the spectrum. Defects of human eye vision include

astigmatism, color blindness, farsightedness, and nearsightedness. Human eye visual defect

resulting in the inability to distinguish colors. Color blindness is usually an inherited sex-linked

characteristic, transmitted through, but recessive in, females. Applicant on the same page

emphasizes that the display device based on user selection and has no bearing on the issue of

enablement. Examiner's question: how does the user select the gray element, i.e. color element?

The answer is, the user uses his/her eye color vision, *id*. in other respect, Applicant should be

specifying if the user uses another device to distinguish between colors.

Applicant on page 19 last two lines argues that it is unclear why the Examiner has chosen to raise

questions for the first time at this advanced stage of prosecution.

Examiner's reply: It is obvious after four office actions dated 2/27/2003; 10/29/2003; 9/07/2004;

4/19/2005 and an interview on 4/19/2005, the Examiner raised questions, and it is not the first

time, e.g. the office action dated 10/29/2003 on page 6 evident on the Applicant's issue.

Examiner withdrawn the claim rejection under 35 U.S.C. 112 second paragraph based on ex

parte Ionescu, 222 USPQ 537 (Bd. Pat. App. & Inter. 1984).

Applicant on page 23 argues that the reference Applet does not simultaneously display of a

plurality of gray elements.

Examiner's reply: The reference Applet clearly illustrates only in figure on first page of the

reference. Examiner again repeats what have been shown and discussed in previous office

actions.

In that figure shown calibrating/estimating the gamma for a monitor, comprising: generating

gray elements (i.e., the center square of gray) and a gray background on a display device, the

gray background representing a gray level of approximately 25-40%. The user can adjust the

slide bar at approximately 25-40% of a gray level, since the gray value background is adjustable

between 0-84. Further, the gray values bright lines can be varied between 0-254, which, on a

percentage scale is 0-100%. The reference does not explicitly specify a plurality of gray

elements meaning more than one square of gray value bright lines. However, the range between

0-116 can be producing a plurality of the gray value bright lines. That also solved the issue for

the size of the display.

Applicant on page 24 argues similar to the previous arguments, e.g. Applicant emphasizes on

adjustable gray background in Brettel that is not fixed background.

Examiner's reply: The user can, e.g. set the gray value background in Brettel to 84, and keep this setting, i.e. considered as a fix background. In this regard, a person skill in the art can see that the Brettel's work provides more options to the user than the current invention.

Applicant further down on the same page argues similar to the previous arguments, however Examiner replies to these arguments to make them clearer. Possibly, the reference considered the human eye vision factor by having an extra option for the user to adjust the gray value background. The rejections are properly done, as the Examiner has reviewed the rejections.

Applicant on page 25 repeated similar arguments.

Examiner's comment: According to the Applicant's disclosure on page 5, line 8 of the specification discloses a dithered gray background representing a gray level of approximately 25 to 40%. That can be equivalent to previous example, e.g. set the gray value background in Brettel to 84, *id*. meaning the gray value background is the same as dithered gray background as Applicant claims. Since the Examiner could not find an exact term that Applicant uses as "dithered", then the following statement would be appropriated: The reference does not explicitly state that the background gray level is "dithered", however, the use of dithered background is obvious. See Yoo in col. 1, lines 19-21 teaches one standard method of converting gray or hue concentration level image data into binary level pixel image data is through the use of dithering or halftoning processes. Examiner's comment: the reference Yoo uses the terms halftoning process equivalent to dithering process. Yoo in col. 3 lines 11-14 teaches that an object of the Yoo's invention is to provide an improved and system for halftoning (dithering) that allows automatic gamma correction without requiring additional software.

Examiner's reply to the Applicant's issue on the threshold value that described by the second

reference Yoo. First and foremost, the range that Applicant claims in the claim 1, 25-40% is

satisfies the definition as a threshold setting, i.e. a range of values may have to create a desired

effect.

The previous rejection is still maintained, with the exclusion of the claim rejection under 35

U.S.C. 112 second paragraph.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-2, 4-9, 11-17, 19, 21-26, 28, 33, 35-37 and 39-48 rejected under 35 U.S.C. 112,

first paragraph, as failing to comply with the enablement requirement. The claim(s) contains

subject matter which was not described in the specification in such a way as to enable one skilled

in the art to which it pertains, or with which it is most nearly connected, to make and/or use the

invention. Applicant claims in claims 1, 15, 25, 41 and 45 that the invention acquires the

information about a gamma for the display device, then simultaneously displayed gray elements.

It seems the Applicant's invention claims just one type of display device, but a person skill in the

art knows, there are different type of displays with different size (from a PDA to a oversize

display), resolutions (from low to high), format (NTSC or PAL or etc.), age of display (10 years

to brand new), and finally different levels of human eye visions.

Questions:

➢ How many gray elements, does Applicant generate?

➢ Is the method claiming, a computer program file? If it is, how does it distinguish

between different display devices?

➢ Is gamma correction based on multi formats (NTSC, VGA, PAL, SECAM and etc)?

➢ Does the invention involve a combination of hardware and software?

➢ Does Applicant rely on human eye vision to measure the gamma correction or a

hardware device?

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

Claims 1, 2, 4-9, 11-17, 19, 21-26, 28-33, 35-37 and 39-48 are rejected under 35 U.S.C.

103(a) as being unpatentable over "Display gamma estimation applet" by Hans Brettel,

copyright 1999, said applet can be located at http://www.tsi.enst.fr/~brettel/TESTS/Gamma/Gamma.html

(referenced hereinafter as "Brettel") and further in view of Yoo US 6,185,005 B1.

1.   As to claims 1, 2, 15-17, 25, 26 and 41-47 Brettel discloses a process for

calibrating/estimating the gamma for a monitor, comprising: generating gray elements (i.e., the

center square of gray) and a gray background on a display device, the gray background

representing a gray level of approximately 25-40% (See the Figure of the Brettel applet. This

applet allows for the adjusting of both the center square and the background. Further, the gray

values of these items can be varied between 0-254, which, on a percentage scale is 0-100%. For

example, a gray value of 84 for the background is equivalent to approximately 33% gray level.

The applet works for background levels from approximately 2 to 190, which correspond, to

approximately .01% to 75% background gray level range. Thus, the applet includes the claimed

range of 25-40%); and estimating a gamma for the display device based on user selection of one

of the gray elements that appears to most closely blend with the dithered gray background (the

applet estimates a gamma value (See the line "gamma=2.14" directly above the sliders. The

values displayed by the applet for the gamma is based upon what value the user selects for the

gray element (center square) that most closely matches the background gray level.). As to the

limitation of "dithered" gray background level, while the reference does not explicitly state that

the background gray level is "dithered", however, the use of dithered background is obvious. See

Yoo in col. 1, lines 19-21 teaches one standard method of converting gray or hue concentration

level image data into binary level pixel image data is through the use of dithering or halftoning

processes. Examiner's comment: the reference Yoo uses the terms halftoning process equivalent

to dithering process. Yoo in col. 3 lines 11-14 teaches that an object of the Yoo's invention is to

provide an improved and system for halftoning (dithering) that allows automatic gamma

correction without requiring additional software. Yoo in fig. 3 illustrates in step 3-1 an input

value for a selected macro halftone cell is obtained in a conventional manner from existing

image data. This input value is tested, in operation 3-2, to determine a pixel rank threshold

value. In accordance with preferred embodiments of the invention, in which gamma correction

is built into the ranking of pixels in the macro halftone screen, the threshold value (Examiner's

interpretation: the threshold value of Yoo is equivalent to Applicant's single dithered gray

background value) can be linearly proportional to the input value (Examiner's interpretation: the

input value of Yoo's invention is equivalent to the Applicant's gray elements, see also fig. 1 in

Yoo illustrates the input value generates the gray elements in Y axis, which simultaneously

displays the appropriate gamma value (gamma correction) according to the input value and gray

elements). Then, in operation 3-3, the rank of each pixel in the halftone screen is compared with

the given threshold value to identify all pixels having a rank above the threshold value. Finally,

in operation 3-4, output data will be generated to darken those pixels having rank values above

the threshold value. The resulting pixel generation data produced by operation 3-4 is then

utilized in a conventional manner to control the outputting, e.g., printing, and operation.

Applicant in independent claims 15,41 and 45 claims a web server and web browser (Examiner's

interpretation: meaning the Applicant's invention is a computer program file that can be reside

on a computer such as stand alone, workstation, server and etc.). It is obvious to a person skill in

the art to transfer/send/ftp/download the computer program file to any network or a remote

computer that has a proper permission the person skill in the art. For example: an email file,

Word document as an attachment, a picture file or download a file from a server. Examiner's

comment: the main invention is about the computer program file that Applicant seems teaching

away from the claim invention. For example: a person skill in the art would like to know how

does the computer program file distinguish between different display devices over a network or a

remote computer.

It would have been obvious to use the teachings of Brettel into Yoo, in order to incorporate the

display graphics in Brettel that shows a background and a center square that can be matched

using range of gray elements at the bottom of the figure to adjust the right gamma value.

Reminder: the gray background in Brettel is adjustable also can be a fixed value. Since the

references are directed to the same process of setting a gamma correction using an operator input

and because the ability of setting the gamma using the component (RGB) colors allows for a

more accurate and distinct gamma correction since the gamma can be adjusted individually for

each component rather than a single global gamma adjustment. Yoo in col. 6 lines 46-64 teaches

in a color system according to the invention, each pixel selector 47 could store a separately

derived pixel rank pattern, depending on the gamma correction requirements for each color.

Each pixel selector 47 storing the pattern of rank values for a macro halftone cell could be a

memory, such as a ROM, a PROM, etc. The rank value for each pixel would be stored at a given

memory location. Threshold data representing a respective color at one image point would be

inputted to the memory. Such an input signal could have, for example, any one of 256 different

values, each value corresponding to a respective gray scale, or hue intensity, level. The location

of each pixel having a rank, which is above a threshold determined by the value of the threshold

signal, would then be read out to a suitable control system to identify those pixels, which should

be provided with a black dot. This information would then be applied to control the application

of dots to the medium on which an image is to be reproduced.

2.   With regard to claims 5, 29, Yoo in col. 6 lines 46-64 teaches in a color system

according to the invention, each pixel selector 47 could store a separately derived pixel rank

pattern, depending on the gamma correction requirements for each color. Each pixel selector 47

storing the pattern of rank values for a macro halftone cell could be a memory, such as a ROM, a

PROM, etc. The rank value for each pixel would be stored at a given memory location.

Threshold data representing a respective color at one image point would be inputted to the

memory. Such an input signal could have, for example, any one of 256 different values, each

value corresponding to a respective gray scale, or hue intensity, level. The location of each pixel

having a rank, which is above a threshold determined by the value of the threshold signal, would

then be read out to a suitable control system to identify those pixels, which should be provided

with a black dot. This information would then be applied to control the application of dots to the

medium on which an image is to be reproduced.

3.   With regard to claims 6, 13-14, 30, 37, 39 and 40 it is obvious to a person skill in the art

to transmit information representing the estimated gamma to a remote server or any other

computer. Modifying the color image at the remote server based on the information is similar to

claim 1's language that is the display device can be a display server, or display remote computer.

4.   As to claims 7, 22 and 31 Brettel on page 1, discloses for estimating the gamma includes:

selecting one of a first plurality of gray elements displayed by the display device that appears to

most closely blend with the dithered gray background; estimating a coarse gamma for the display

device based on the selected one of the first plurality of gray elements; selecting one of a second

plurality of gray elements displayed by the display device that appears to most closely blend with

the dithered gray background, wherein the second plurality of gray elements includes the

selected one of the first plurality of gray elements; and estimating a fine gamma for the display

device based on the selected one of the second plurality of gray elements, wherein the estimated

fine gamma is the estimated gamma.

5.   As to claims 8, 23 and 32 the limitations in the claim is obvious because Yoo in fig. 1

illustrates plurality of gray elements with different intensity, see range of values from white

element to dark element.

6.   As to claims 12, 24, 36, Brettel on page 1, illustrates for estimating both the blackpoint

and the gray balance of the display device; and characterizing the colorimetric response of the

display device based on the estimated gamma, blackpoint, and gray balance.

Claims 4, 24 and 28 rejected under 35 U.S.C. 103(a) as being unpatentable over

Brettel, Yoo, and further in view of Robert W. Berger, copyright 1997 (referenced

hereinafter as "Berger").

7.   With regard to claims 4, 24 and 28 Berger on page 3, discloses that color can be

measured in a device, and a colorimeter is a device that evaluates and identifies colors in terms

of a standard set of synthesized colors. To one of ordinary skill in the art it would have been

obvious to use the teachings of Berger in the combination of Yoo and Brettel since all three of

the references are directed to the same process of setting a gamma level using an operator input

and because the ability of setting the gamma using the component (RGB) colors allows for a

more accurate and distinct gamma correction since the gamma can be adjusted individually for

each component rather than a single global gamma adjustment. Thus, it would have been obvious

to one of ordinary skill in the art at the time the invention was made to incorporate the teaching

of Berger into Brettel and Yoo in order to show the user to change the gamma from 1.4 to 2.2

over web average gamma that is 2.5.

8.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time

policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

MONTHS of the mailing date of this final action and the advisory action is not mailed until after

the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the mailing

date of this final action.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Javid A. Amini whose telephone number is 571-272-7654. The

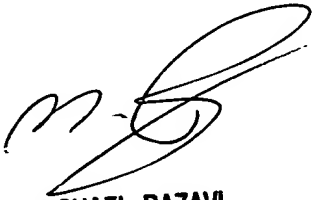examiner can normally be reached on 8-4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Michael Razavi can be reached on 571-272-7664. The fax phone number for the

organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Javid A Amini
Examiner
Art Unit 2672

Javid Amini

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